detcon inc.

Industrial Grade Gas Detection

Fixed Gas Detectors
Portable Gas Detectors
Flame Detectors
SmartWireless®
Control Solutions
Gas Analyzers

DCB0315

Detcon Company Profile

Detcon's Headquarters is in The Woodlands, TX just north of Houston.

ISO 9001:2008 Certified
ATEX QMS Certified
HART Certificate of Membership
ABS QMS and Product Certified

Company Mission

Detcon is a global leader in the design and manufacturing of a wide range of industrial grade gas detectors, electronic control systems, and wireless technology. Detcon was established in 1983 and entered the commercial market with its first products in early 1985. Today the company has grown to include a wide range of sensor technologies and state of the art product designs engineered to perform reliably in the most challenging and rugged industrial environments. Detcon's growing success is achieved by fusing decades of field experience with engineering expertise to produce superior products and innovative solutions. Our corporate objective is simple:

"To provide products and services of the highest quality so that we establish an unequaled level of trade name recognition and trust."

Detcon accomplishes this objective by adhering to a rigid quality assurance program, and by keeping in close contact with the needs of its customers. Today, Detcon is helping companies around the world ensure safety and maintain productivity at the highest level.

ISO 9001:2008 Certified

Detcon's product design and manufacturing process is based on continuous quality improvement and a TOTAL QUALITY MANAGEMENT program. The program is designed to address and meet the needs of its customers while improving the overall management of the company. The Detcon Quality Program has been certified to the ISO 9001: 2008 standard by an accredited third party registrar.

Quality Policy

Detcon, Inc. will continuously improve its products to better satisfy the needs of its customers and will deliver, on time and every time, defect free products and services.

Model Series 700 Gas Detector

Environmentally Bulletproof

- Water-Proof
- Corrosion-Proof
- Vibration-Proof
- Multi-Layer Surge Protection
- Pre-emptive Fault Diagnostics

Detcon Model Series 700 industrial grade gas detectors are a new generation of intelligent gas sensors. This new level of environmental durability includes an electropolished 316 stainless steel housing, multi-layered transient spike protection circuitry and 100% encapsulated electronics. The sensor electronics are completely protected and immune to water ingress and corrosion. Sensor elements are all plug-in components that can easily be replaced in the field.

Model Series 700 gas detectors certified SIL2 capable include: DM-700 toxic electrochemical, TP-700 H2S MOS, IR-700 infrared combustible hydrocarbons, and FP-700 catalytic bead combustibles.

Available Sensor Technologies

Chemfet MOS Solid State H2S
Catalytic Combustible Gas
Infrared Combustible Hydrocarbons & CO2
Electrochemical Toxic Gases & O2 Deficiency
Photo Ionization Volatile Organic Compounds

Integration Options

- Remote / Alarm Module
- Hart Module
- Foundation Fieldbus Module
- Wireless Interface Module

Detcon's Model Series 700 can be configured to meet a wide range of applications by utilizing available integration options. Remote operation, communication protocol options, relay output and other options are available.

Model Series 500 & 600 Gas Detectors

Modular Plug and Play

- Non-Intrusive Interface
- 4-20 mA Output
- Class I, Division 1, Groups B,C,D
- Integral Sensor Fault Diagnostics
- Options
  - Modbus RTU, RS-485
  - Alarm Relays
  - HART
- Modular Design
  - Easy Remote Sensor Mounting
  - Plug and Play Sensors & Transmitters

Available Sensor Technologies

Chemfet MOS Solid State H2S
Catalytic Combustible Gas
Infrared Combustible Hydrocarbons & CO2
Electrochemical Toxic Gases & O2 Deficiency

Model 500/600 gas detectors feature Detcon's MicroSafe intuitive software. Calibration instructions appear in simple interactive and sequential script on a 16-character backlit alphanumeric display. The transmitter design incorporates extensive fault diagnostics with each condition conveniently identified on the transmitter display. Model Series 500 comes standard with a linear 4-20 mA output, self-adjusting zero & span, and LED indicators for fault and calibration status. Model Series 600 adds 3 alarm relays and an RS-485 serial communications port.

Model Series 100 Gas Detector

Simple, Affordable, Durable

- 2-Wire Loop Powered
- Non-Intrusive Interface
- 4-20 mA Output
- Class I, Division 1, Groups B,C,D
- Fully encapsulated electronics
- Options
  - Junction Box
  - Loop Powered Display
  - Alarm Relays
  - HART
  - Modbus Adapter
- Modular Design
  - Easy Maintenance
  - Plug and Play Sensors
  - Intuitive Operating Software

Available Sensor Technologies

Electrochemical Toxic Gases & O2 Deficiency

Model 100 Series gas detectors are 2-Wire loop powered and feature intelligent electronics, comprehensive fault diagnostics and a standard analog 4-20 mA output. Additional accessories include a loop powered digital display, Remote Alarm Module (RAM), HART, and a current to RS-485 converter.

Model GD10P

IR Point Detector for Combustible Gas

- Solid state IR sources (SimSource™)
- High IR source flash rate
- Selectable response rate
- True dual path, double compensation optical design
- Early dirty optics warning
- Independently heated mirror and lens

The GD10P detector is the benchmark for combustible gas detection on offshore installations. It has set the standard for gas detectors in the areas of safety, stability and low maintenance. GD10P is the fastest IR point detector on the market and requires no calibration.

Model GD1

H2S Laser Open Path Gas Detector

- Optical IR Sensor no Cal or Replacement
- Tuneable laser diode/laser scanning
- No undisclosed source of failure
- 5 years warranty
- Vibration and misalignment tolerant optics
- Fastest possible speed of response
- Large area of coverage

The GD1 sets a new standard for toxic gas detection. A tuneable laser diode eliminates environmental effects from sun, rain and fog; a genuine step change in performance for safety systems and life cycle costs. ATEX approved, HART communications and suitable for SIL2.

Model DF-TV7-T & DF-TV7-V

MultiFlame IR & UV/IR Flame Detectors

- Triple IR Certified SIL3 (Model DF-TV7-T)
- UV and dual IR Certified SIL2 (Model DF-TV7-V)
- Wide field of view
- Relays and 4-20mA output
- Continuous auto-check of optical lens
- Selectable sensitivity and time delays
- Wireless detector configuration and testing using TLU
- HART® output option available
- Multi-spectrum infrared flame using three wavelengths
- Long range up to 80m, 260 feet (Model DF-TV7-T)
- Wireless option available (Model DF-TV7-T)

DF-TV7-T is a multi-spectrum IR flame detector using 3 wavelengths. It responds to hydrocarbon fires and is the right choice for dirty environments and smoky fires.

The DF-TV7-V is a UV/dual IR detector and offers excellent flame detection while maintaining outstanding false alarm immunity.

Control Systems

Model X40 Series Multi-Channel Control Systems - 2 to 32 Channels

- Completely User & Field Programmable
- Analog or RS-485 Input Options
- 3 Adjustable Alarm Level Relays, 1 Fault Relay
- Easy Intuitive Field Configuration
- Wired or Distributed I/O
- Alarm Silence/Alarm Reset Feature
- Data Logging of TWA, Peak, Cal & Alarm Events
- Addressable RS-485 Serial Communication
- SmartWireless® Capable

Model X40-8-N4X

Model X40-N7

Model X40-N1P

Detcon's Model X40 is among the most versatile gas detection control systems on the market. Available in 2, 8, and 32 channel versions the controller is designed to receive and supervise inputs using either 4-20mA or Serial RS-485 Modbus.™ Among the system's unique features is a wireless version that can be used with Detcon's SmartWireless® product line and Oldham's BM 25 Wireless multi-gas monitor.

The Model X40 can be customized based on individual application needs using stackable din-rail mounted I/O modules. Those available for use with the control system include a 4-channel 4-20mA input module (DA-4), a 4-alarm relay output module (RL-4), a 4-channel 4-20mA output module (AO-4), and a 4-relay contact input module (DI-4). The devices can be mounted within the main system enclosure or installed remotely to simplify field wiring.

The Model X40 features a backlit alphanumeric screen that displays alarm status and current readings for channel number, gas type, and gas concentration for up to 8 field devices simultaneously. The X40 has a simple menu driven interface for system configuration and is completely field programmable using a small handheld magnet. Enclosure options include: NEMA 4X, NEMA 1 panel mount, and NEMA 7.

Model MCX-32 Multi-Channel Control System - Up to 64 Channels

- Completely User & Field Programmable
- 6" Monochrome LCD with Touch-Screen user Interface
- Analog, Digital or Modbus RTU Serial Input Capability
- Readily Field Expandable with Auto Configuration Capability
- Data Logging: Alarms, Cal, Comm Errors, Faults, Peak & Avg
- Versatile Distributed I/O Installation Options
- Lightning & Over-Voltage Protection Standard

Detcon Model MCX-32 is a multi-channel integrated control system with a capacity of 64 active channels. It can receive and supervise inputs from a wide range of field devices with either a 4-20 mA DC or serial output. The standard serial protocol is RS-485 Modbus RTU. This unique system design features "auto-configuration" of addressable devices that are located in a device library. The Model MCX-32 controller provides a unique combination of "auto configuration" simplicity and ease of use with customizable expansion capabilities.

Model 10 and 12 Series Single Sensor Control Card Systems

- 4 to 16 Channel Packaging (Model 10)
- 4 to 12 Channel Packaging (Model 12)
- Programmable Relays
  - 2 Alarms + Fault (Model 10)
  - 3 Alarms + Fault (Model 12)
- NEMA 1, 4X, and 7 Packages
- Modular Plug-in Design
- Compatible with PLC's, SCADA, DCS
- Outputs: 4-20 mA, RS-485, Alarms
- Addressable via RS-485 Serial Communication
- Alarm Disable Function

Detcon Model 10 & 12 single channel digital control modules are designed to supervise and display the status of a single remote sensor assembly. Modules are available for a variety of toxic and combustible gases and are compatible with a complete line of Detcon enclosures and mainframe hardware assemblies.

SmartWireless® Technology

Wireless Battery Powered Devices Eliminate Expensive Installation & Wiring Costs

- Quick and Easy Deployment
- Permanent or Temporary Installations
- Fault Tolerant Safety Network
- Network Capacity up to 32 Devices
- Div1 & Div2 Controls, Alarms & Solar
- Distributed Data Processing
- No Single Point of Failure
- Universally Acceptable Frequency 2.4 GHz
- Low Power Requirement
- 1.5 Mile Line-of-Sight Range
- Robust Mesh Network Topology
- No Controller Required (RXT-300 only)

CXT Sensor Assemblies

Detcon's Model CXT is a compact, low powered, wireless sensor that detects for dangerous combustible & toxic gases and oxygen deficiency. This environmentally bulletproof gas detector has a built-in display and is powered by either rechargeable or disposable batteries.

CX Sensor Assemblies

Detcon's Model CX is a wired version of the Model CXT that can be used with SmartWireless® Site Sentinel CX/CXT Controllers as well as other Detcon control systems. Standard outputs include 4-20 mA, and RS-485 Modbus.

Site Sentinel CXT Controller

The SmartWireless® Site Sentinel CXT Controller provides operator interface to the network and real time status display of all network devices. Flexible and expandable, a Site Sentinel network consists of any combination of (up to 32) wireless and/or wired sensors, one or more Site Sentinel control panels, and alarm warning devices. Command functions include alarm reset, alarm acknowledge, alarm test and radio silence. The control panel displays real time gas concentrations, field device status, battery levels, network RF signal quality and fault diagnostic conditions. Display indications include field device location, alarm status, channel, gas reading, battery life & link signal strength. Standard features include removable SD card with datalogging.

Site Sentinel CX Sensor Station

The Site Sentinel CX Sensor Station transmits data from up-to 4 wired gas detectors back to a CXT controller. The sensor station includes a battery that powers the radio, alarm devices, and the attached sensors.

BM 25W Wireless Transportable Multi-Gas Area Monitor

The BM 25W is a multi-gas monitoring system that offers a wide range of applications. The system detects up to 5 gases and can include up to 30 devices in a standard network. Should a device fail or an obstruction occur, communication automatically re-routes allowing the network to remain in operation. Powered by a NiMH battery pack, the BM 25W offers up to 135 hours of continuous run time. Standard features include STEL and TWA values and data logging. An intrinsically safe trickle charger is also available for long-term area monitoring in classified zones. The BM 25W is also compatible with Detcon's CXT, X40 & MCX-32 Wireless controllers.

Audio/Visual Alarm Options

Alarm relays include adjustable set points and latching/non-latching configurations. Division 1 and Division 2 packages available.

Battery Power Options (Rechargeable & Disposable)

Battery options include rechargeable packs as well as packs with disposable/replaceable batteries. Both use lithium ion technology and are available in low and high capacity versions. Detcon battery packs provide continuous run times for months at a time. Actual run times are based on battery and sensor selection. Paired with a solar charging option Detcon SmartWireless system components can provide indefinite run times.

- Class I; Division 1; Groups C, D
- Plug-in High Energy L-ion Technology
- Smart Rechargeable Pack: safety battery with low voltage disconnect, internal safe charge control circuit, digital charge level output, temperature range safety circuit
- "C" Cell Battery Pack: compact with easy replacement cells

Network Configuration Tablet

The Network Configuration Tablet is used to identify and establish network members and can also be used to determine signal strength between field devices and controls. The auto configuration feature provides field device search and find capability that simplifies network set up and commissioning.

- 10.1" Touch Panel LCD
- USB Wireless Interface

Sentinel Sitewatch Remote Monitor

Sentinel SiteWatch is an advanced networking device that provides remote access to any Detcon gas detection system via Ethernet or cellular communication. The Sentinel SiteWatch Ethernet version provides an IP addressed web page that can be accessed via any web browser and both the Ethernet and Cellular versions provide automated emails for all alarm and fault conditions instantaneously. SiteWatch technology can be embedded into the Model CXT, X40 & MCX-32 wireless controllers.

Power Options

Detcon SmartWireless devices can use line or battery power. Battery power run times can be extended indefinitely by using solar power options.

Solar

- 1.5 Watt and 3 Watt (Class I, Division 1)
- 5, 10, 20, 30, and 40 Watt (Class I, Division 2)

Natural Gas Pipeline Analyzers

Model Series 1000

- Continuous Measurement with Superior Uptime
- H2S Ranges from 10 ppm to 5% by Volume
- CO2 Ranges from 3,000 ppm up to 100%
- Readily Field Replaceable Sensors
- Simple Field Calibration
- Single and Dual (H2S/CO2) Configurations

Detcon Model Series 1000 H2S and CO2 gas analyzers are designed to provide accurate and continuous measurement of target gas concentrations in natural gas treating plants, gas production wells and custody transfer points along gas transmission pipelines. The application flexibility of this family of analyzer products is based on utilization of proven sensor technologies and the ability to customize according to the application. The result is a simple and economical yet powerful analytical tool offering capabilities equivalent to analyzer technologies costing much more.

In the Model 1000, Detcon's long history of gas monitoring sensor research and manufacturing is combined with a field tested and proven pedigree in sampling system design and operation. The result is a simple and economical yet powerful analytical tool offering capabilities equivalent to analyzer technologies costing much more. Long sensor life, easy operator interface and embedded intuitive maintenance scripts help to maintain high quality analysis of H2S and CO2 content in natural gas processes.

NEMA 4X Weatherproof
Enclosure Options
(304-SS or Painted Steel)

Design Approach

The Model 1000 design is based on three factors: High accuracy, simple field serviceability, and fail-safe operation.

Accuracy

Detcon's field proven MicroSafe™ sensor technologies have been combined with high-precision gas conditioning and flow control components to achieve accurate and repeatable measurement.

Serviceability

The Model 1000 uses a very simple and accessible modular design. All components are assembled on a flat panel following a simple flow pattern, making easy work of service and trouble-shooting.

Fail-safe Operation

All Model 1000s are equipped with liquid-rejection membrane filters and over-pressure relief protection. Flow fault detection and alarms are available as options. The entire assembly is both explosion proof and weatherproof.

Portable Gas Detectors

Model PS200 4-Gas Monitor

- LEL, O_2, CO, H_2S
- Audible, LED, & vibrating alarms
- Certified (ATEX, cCSAus, CE)
- Internal pump (optional)
- Data logging standard
- Sensor integrity checking

The PS200 is a rugged, easy to use portable multi-gas detector ideal for hotworks and confined spaces. Both lightweight and durable the instrument monitors and displays up to four hazardous gas conditions simultaneously. Options include Auto Bump & Cal Station, Colored Boots and 5-Way Charger.

Model PS1 Single Gas Monitor

- Single gas - H_2S, O_2, CO, SO_2
- Fully programmable alarms
- Certified (ATEX, CSA, CE)
- On/Off Capability
- Data logging standard
- Displays real time value

The maintenance-free PS1 single gas monitor is designed with industry leading features. Both lightweight and easy to use, the self-monitoring device clips easily onto a collar or vest and features on/off capability and field adjustable alarm settings. Widely used in the oil and gas industry, the PS1 also has an optional Auto Bump Test and Calibration Station as a separate component. The calibration station provides a fast visual indication that the instrument is calibrated correctly.

PS500 5-Gas Monitor

- Displays up to 5 gases
- Built-in pump or diffusion mode
- UL Approved
- Data logging standard
- IP 65 approved
- LEL, O_2, CO, H_2S, SO_2, CL_2, NH_3, NO, NO_2, CO_2, PH_3, VOC

Features such as pre-calibrated plug-and-play sensors and password protection make the PS500 perfect for rental applications, plant turnarounds, fire & hazmat, and confined spaces. The PS500 has global approvals.

GT Series - 1 Instrument, 7 Measurement Modes

- Measures up to 4 gases
- Manual/automatic datalogging
- UL Approved
- ppm, LEL and volume flammable gas ranges for leak detection
- Large button operation with simple display prompts
- LEL, O_2, CO, H_2S, SO_2, CL_2, NH_3, NO, NO_2, CO_2, PH_3, VOC

Designed for the gas industry, the GT satisfies all the needs of service technicians working with gas. With seven modes of operation, (Leak Test, Confined Space Entry, Barhole Testing, Carbon Monoxide, Purge, Sniffer, Pressure Leak Tightness) the GT Series is the most versatile instrument available.

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